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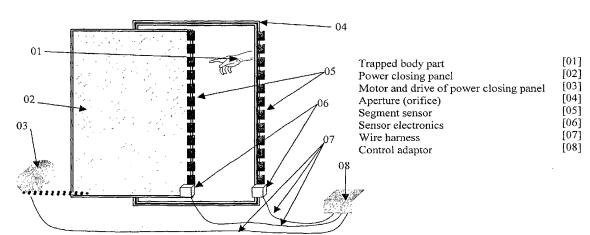
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(54) Title: A SEGMENTED CAPACITIVE CLOSURE OBSTRUCTION SENSOR



(57) Abstract: The invention is a capacitive sensor system for preventing the pinching or trapping of a human body part or foreign object by a power-closing panel (02). The body part or object is sensed either before contact or at the time of contact with the sensor electrode by a change in capacitance. When the object or body part is detected, the power closing panels (02) can be reversed or stopped to prevent the trapping of the object. The sensing electrodes consist of multiple segments. Each segment detects the capacitance of the sensed object (with respect to ground or between adjacent or nearby elements) and the adjacent environment. The capacitance values for each of the segments are analyzed in real time and compared against the average of the highest value obtained from a certain number of segments. When the capacitance of one or more segments is less than the average of the capacitance of all or some of the segments minus a predetermined constant, the sensor system is triggered.



INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER			
IPC(7) : E05F 15/10; H02P 1/00, 3/00, 5/00, 7/00 US CL : 318/256, 264, 434; 49/26, 28			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 318/256-258, 264-266, 268, 269, 272, 273, 275, 280-282, 434; 49/26, 28, 31, 33			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap	ppropriate, of the relevant passages	Relevant to claim No.
Y	US 6,091,217 A (PARSADAYAN) 18 July 2000 (18		1, 2, 4-19
Y	through column 7, line 12; column 8, lines 42-60; column 10, lines 2-12 and lines 49-64 UD 5,280,754 A (FLANAGAN ET AL.) 25 January 1994 (25.01.1994), abstract, figure 1, column 2, line 65 thfugh column 3, lin 37; column 4, lines 34-48; column 5, lines 6-46.		
Y	US 4,706,227 A (DUVALL ET AL.) 10 November 1987 (10.11.1987), abstract, figure 1, column 2, lines 40-68; column 3, lines 1-28 and lines 47-62		
Y	US 4,783,618 A (ARTRIP) 08 November 1988 (08.11.1988), abstract, column 2, line 24 1, 2, 4-19 through column 5, lines 3.		
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Further documents are listed in the continuation of Box C. See patent family annex.			
"A" document defining the general state of the art which is not considered to be of particular relevance		date and not in conflict with the applic principle or theory underlying the inve	ention
"E" earlier ap	plication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be conside when the document is taken alone	
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"O" documen	t referring to an oral disclosure, use, exhibition or other means	being obvious to a person skilled in th	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
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